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Optical Fiber Communication Conference and Exposition
National Fiber Optic Engineers Conference

Technical Conference:
March 25–29, 2007

Anaheim Convention Center
Anaheim, California, USA

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Photonics21

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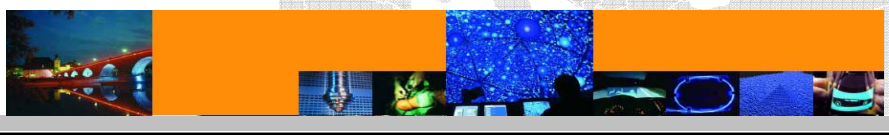

Outline

- About Photonics21
- Activities & Achievements
- Action items for 2007

ETP Photonics21

The European Technology Platform (ETP) Photonics21 is a European membership association with no legal form.

The **general objectives** of Photonics21 are:

- Establish strategic links and align common efforts in Photonics R&D;
- Transform knowledge into leading-edge technologies and products which are competitive on a global scale;
- Define medium to long-term research and technological development objectives;
- Provide for the necessary research environment capable of accelerating Photonics research in Europe.

Genesis of Photonics21

- **Autumn 2004:**
  Launch of an industry-led European Photonics initiative
- **February 2005:**
  Publication of the joint strategic vision paper "Photonics for the 21st Century"
- **December 2005:**
  Foundation of the ETP Photonics21 at Bibliotheque Solvay in Brussels and first Photonics21 workshop

PHOTONICS 21

Photonics21 Executive Board

President: Alexander von Witzleben, CEO Jenoptik

Vice Presidents: Bernd Schulte, President EPIC
Paul Lagasse, IMEC, Director Intec Division
Malgorzata Kujawinska, Warsaw University of Technology

Work Group Chairs:

Information and Communication	Industrial Production/ Manufacturing & Quality	Life Science & Health	Lighting & Displays
Giorgio Anania, CEO Bookham	Peter Leibinger, CEO Trumpf Lasertechnik	Michael Kaschke, CTO Carl Zeiss	Peter Stormberg, CTO Philips Lighting
Security, Metrology & Sensors	**Design & Manufacturing of Components & Sensors**	**Photonics Research, Education & Training**	**Secretariat Photonics21**
Jean-Francois Coutris, Vice President SAGEM	Lars Thylen, Royal Institute of Technology KTH	Chris Dainty, European Optical Society (EOS)	VDI Technologie-zentrum GmbH

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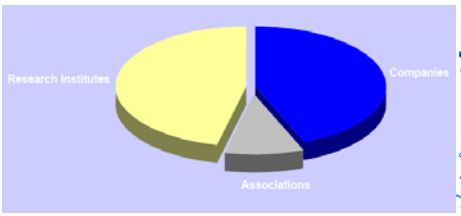
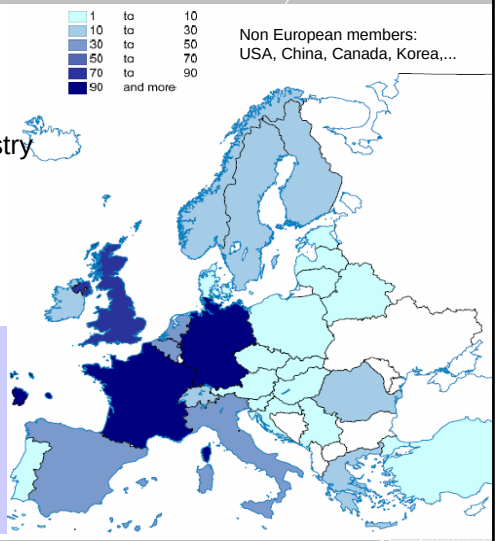
Photonics21 members

- > 600 members from 35 countries
- 90% members located in EU-25
- Ratio between members from industry and science well-balanced
- Majority of industrial members represent SME





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Photonics21 Activities

Photonics Strategic Research Agenda "Towards a Bright Future for Europe" published

- Prepared by more than 350 experts from 27 countries, including 120 companies
- Strong commitment and dedication from Photonics21 members: Agenda has been compiled in only 3 months!
- Hand-over to Commissioner Viviane Reding

Statement Commissioner Reding: 'Photonics technology is of strategic importance to European market'

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Photonics21 Activities

Photonics21 research priorities for the first calls in FP7 presented to the European Commission

- Working groups defined 14 research priorities
- Ph21 delegations visited 13 heads of units from three Directorates General
- Meetings with following units took place:

  Technology for innovation; ICT industries and E-business; Communication Technologies; ICT for Health; Materials; Micro and NanoSystems; Products, Processes, Organisations; Nanoelectronics and Photonics; Research Infrastructures; Space policy ... security research; Aeronautics: Research training networks...

DG Information Society and Media

DG Research

DG Industry and Enterprise

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WG1 'Information and Communication' Research priorities for the first calls in FP7

1. **Photonic technologies for high and ultra high speed optical core networks**
   Objective: To develop component technology that can deliver truly cost effective transport at 40Gbps and higher bit rates, to enable the next phase of core network evolution.

2. **Photonic technologies for radical cost reduction and enhancement of the Access Network**
   Objective: To develop photonic technology for the scalable, future proof and economic access network.

Complete list and description of research priorities can be found at the Photonics21 website (member area)

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WG 6 'Optical Components and Systems' Research priorities for the first calls in FP7

1. Photonic integration technologies for chips of higher functionality and drastically reduced footprint.
Objective: To develop integrated photonic technology that drastically reduces the size and increases integration levels and functionality of integrated photonics chips, thereby also making them more cost effective.

2. Production strategies and systems for the integrated manufacturing and packaging of components and subsystems
Objective: To develop production technologies for photonic systems of different complexities, from packaged chips to subsystems and complete systems, such that dramatic savings in cost and time results.

Complete list and description of research priorities can be found at the Photonics21 website (member area)

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Photonics21 Achievements

Visibility of Photonics within the European Commission improved

- Importance of the Photonics sector has been clearly recognized by the European Commission
- Cooperative working environment with the European Commission
- Photonics unit within the European Commission established!!!

SEVENTH FRAMEWORK PROGRAMME

Photonics is now recognized as a strategic technology for Europe

- Recommendations of the Strategic Research Agenda have been widely considered in the first work programme of FP7.

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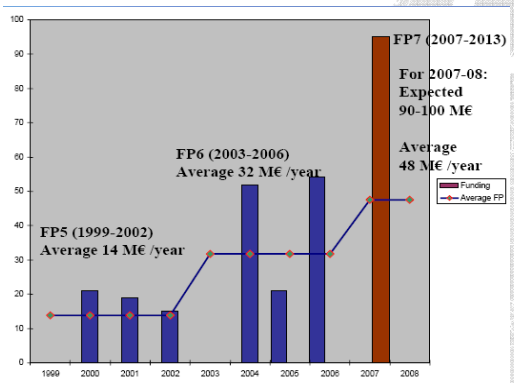
Photonics21 Achievements

Example: Funding for Photonics component research in FP7 will be increased significantly



SEVENTH FRAMEWORK PROGRAMME

Source: European Commission

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Action items for 2007

Establish a Photonics21 Mirror Group with representatives of at least eight European countries.

- Improve national support for Photonics and align national and European research priorities
- First target countries to be approached: France, UK, Germany, Sweden, Ireland, Slovenia, Netherlands, Austria, Poland, Italy, Spain, Finland
- First meeting: May/June 2007

Further initiate co-operations with relevant European Technology Platforms

- Coordinate research priorities and realize synergies
- E.g. Nanomedicine, ...

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Action items for 2007

Integrate national and regional photonics Associations, Networks and Cluster

- Align activities under the umbrella of Photonics21
- Agreement on research priorities and implementation on national/regional level

Further support the launch of National Technology Platforms (esp. in Eastern European Countries)

- Assist in setting up sustainable structures for Photonics on a national level
- Establish a 2 way communication process with National Technology Platforms

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Action items for 2007- Working Groups

Build up consortia and prepare proposals with industry participation

- Members of the Working Groups are building up project consortia and writing proposals for FP7
- e.g. WG2: To date, 52 project proposals on FP7 calls.

Roadmaps and Research priorities for European Photonics research

- Develop roadmaps for promising technologies and products (e.g. ePHOTONE/One)
- Identify research priorities per work group for the upcoming work programme
- Integrate outcome of relevant European projects into the strategic vision (e.g. ePIXnet, MONA)

ACCORD Objectives

The ACCORD project has the objective

- to put **pre-competitive** photonic components and systems in the hands of researchers and students
- at **no net cost** to the university or to the company that furnishes the prototypes and
- to facilitate transfer of the university results for potential end-users especially SMEs in **new markets, new applications**.

Info & Timeline

www.ist-accord.org

1st Call for components:	15/01/07 – 28/02/07
Listing of available components:	12/03/07
1st Call for R&D Projects:	12/03/07 – 13/04/07
Notification of acceptance:	15/05/07
Purchase of components:	15/05/07 – 31/08/07
Start of the projects:	01/09/07
2nd Call for components:	01/01/08 – 31/03/08
2nd Call fort R&D Projects:	15/04/08 – 16/05/08

BroadBand Europe

Koningin Elizabethzaal, Antwerp, Belgium
Conference : 3 - 6 December 2007
Trade-show : 3 - 5 December 2007

Call for Papers

Submission deadline July 17th 2007

Electronic submission only via www.bbeurope.org

... New policies

... New products

... New prospects

Papers are solicited in all areas related to BroadBand Drivers & Applications, Content, Standardisation, Socio- and Techno-economic impact, Monitoring, Measurement, Regional projects & Deployment, National strategies and BroadBand technologies such as FTTx, Cable, Satellite, Wireless, PLC, ...

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Thank you

Contact: secretariat@photonics21.org

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